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REMARKS/ARGUMENTS

Claims 1 through 6 and 8 through 73 remain pending in this application. Claim 7 has been cancelled.

The drawings are objected to under 37 C.F.R. 1.83(a) as failing to show every feature of the invention specified in the claims. The Action asserts that the 'weakened base region' of claim 32 must be shown or the features cancelled from the claim. Page 11, lines 22-24 of the specification provides "[g]rooves 52 provide a hinge point or weakened region to facilitate bending of petals 44 to their tapered configuration". Grooves 52 are shown in Figure 7. Accordingly, reconsideration and withdrawal of the objection to the drawings are respectfully requested.

The Action asserts the title of the invention is not descriptive. The title has been amended to "Tapered Tampon Application with Petals and Taper Ratio" as suggested by the Examiner.

Claim 1 is objected to as informal. Claims 1 and 37 have been amended to replace "tapered insertion end" with "tapered insertion tip" for clarification. Reconsideration and withdrawal of the objection to the claim are respectfully requested.

Claim 26 is objected to as informal. The Action asserts that claim 26 is objected to because the maximum outside barrel diameter of greater than or equal to 0.598 inches is referred to as the maximum outside barrel diameter being less than .598 inches. Claim 26 actually recites that the barrel has a maximum outside diameter of greater than or equal to 0.598 inches to less than 0.658 inches which is contrary to the Actions contention. Therefore, reconsideration and withdrawal of the objection to the claim are respectfully requested.

The Office Action asserts that the 'length of a projection of the insertion end taper along a longitudinal axis of the barrel' BD of claim 1 is interpreted to be any length that

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extends partially and/or entirely along the longitudinal axis of the barrel. Page 6, lines 2 through 5 provides "[t]o achieve such enhanced properties, the taper ratio, represented by the ratio of the length of the taper projection along a longitudinal, centerline, or horizontal axis of the barrel BD to the projection length along a radius or vertical axis CD, is greater than 1 to about 8." CD and BD are shown in Figure 2. Thus, the longitudinal axis of the barrel and the projection length along a radius or vertical axis are defined by BD and CD, respectively, shown in Figure 2.

The Action asserts that the 'base region' 48 of claim 21 is interpreted to be any area at the base of petals measured from the tip of the insertion end to any point (not just where tapering ends) on barrel 22. Page 12, lines 3 through 5 provides "[r]eferring to Fig. 8, in another embodiment of the present invention, radial slits 50 between the sides of each adjacent pair of petals 44 extend below base region 48, which is the area at the base of the petals, and circumferential groove 52." Thus, the base region is the area at the base of the petals as shown in 5, 6, 7, and 8.

Claims 1 through 10, 13 through 22, 24, 25, 27, 28, 30 through 61, 63, 64, and 66 through 73 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Suga, U.S. Patent Application Publication No. 2001/0056253 (hereinafter "Suga") in view of Berger et al. U.S. Patent No. 3,895,634 (hereinafter "Berger").

Claim 1 recites a tampon applicator comprising a barrel. The barrel has a tapered insertion tip with a plurality of petals. The insertion tip has a taper ratio greater than 1 to about 8. The taper ratio is a length of a projection of the insertion tip taper along a longitudinal axis of the barrel to a length of a projection of the insertion tip taper along a radius of the barrel at a base region of the plurality of petals. The plurality of petals each have a thickness of about 0.004 inches to about 0.022 inches.

Claim 37 recites a tampon applicator having a barrel with a tapered insertion tip. The tapered insertion tip has a taper ratio represented by a ratio of a length of a projection of the insertion tip taper along a longitudinal axis of the barrel to a length of a projection of the insertion tip taper along a radius of the barrel at a base region of one or more petals of

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greater than 1 to about 8. The barrel is formed from a material selected from the group consisting of cardboard, cardboard laminate, paper, paper laminate, pulp slurry, paper slurry, biopolymer, pulp-molded paper, and any combinations thereof.

Suga describes an applicator with a sanitary tampon. The applicator includes an outer cylindrical tube that has openings at front and rear ends thereof and an inner plunger axially movable within the outer cylindrical tube. The tampon is cased within a region of the outer cylindrical tube adjacent the front end thereof and adapted to be ejected by the inner plunger out of the opening of the front end. The outer cylindrical tube has a length dimensioned to be longer than a length of the tampon by 50~80 mm.

Berger describes a tampon inserter including a cylindrical, hollow tubular member adapted to contain a tampon and having a tapered front insertion end and an opening in its rear end. The mean cross-sectional wall thickness of the cylindrical portion of the tubular member is of a predetermined thickness sufficient to provide wall stability to the tubular member prior to, during, and following the tampon ejection. The mean cross-sectional wall thickness of triangular segments is of a predetermined thickness sufficient to provide flexibility to the segments during tampon ejection, the mean wall thickness of the triangular segments being substantially less than the mean wall thickness of the cylindrical portion of the tubular member.

Applicants respectfully submit that Suga fails to disclose or suggest all of the claim limitations recited in claims 1 and 37. The Action asserts that Suga discloses a tampon applicator having a taper ratio of 6 to 7.5. Applicants respectfully disagree. Suga provides that "the full length L may be selected within a range of approximately 70 mm approximately 140 mm". (paragraph 0011, lines 13-14). Suga further provides "an outer diameter D of the outer cylindrical tube 2 may be appropriately dimensioned so far as the outer cylindrical tube 2 can be smoothly inserted into the vaginal canal, the outer diameter D is preferably dimensioned in a range of 8~20 mm." (paragraph 0011, lines 15-19). Length L is the entire length of the barrel as clearly shown in Figure 2. Diameter D is the diameter of the barrel as clearly shown in Figure 2. Thus, Suga provides dimensions of the entire length of the barrel and the diameter of the barrel. This is in contrast to, a taper

ratio insertion tip that has a taper ratio greater than 1 to about 8 and is a length of a projection of the insertion tip taper along a longitudinal axis of the barrel to a length of a projection of the insertion tip taper along a radius of the barrel at a base region of the plurality of petals, as recited by claim 1, and a tapered insertion tip that has a taper ratio represented by a ratio of a length of a projection of the insertion tip taper along a longitudinal axis of the barrel to a length of a projection of the insertion tip taper along a radius of the barrel at a base region of one or more petals of greater than 1 to about 8, as recited by claim 37. Therefore, Suga fails to provide for a taper ratio, let alone a taper ratio of a length of a projection of the insertion tip taper along a longitudinal axis of the barrel to a length of a projection of the insertion tip taper along a radius of the barrel at a base region of the plurality of petals or a taper ratio greater than 1 to about 8.

Applicants respectfully submit that Berger fails to disclose or suggest all of the features recited in claims 1 and 37. As conceded by the Action, Berger does not expressly disclose a taper ratio. Therefore, Berger cannot cure any deficiency noted above with respect to Suga.

Furthermore, Suga fails to disclose a plurality of petals that each have a thickness of about 0.004 inches to about 0.022 inches, let alone a plurality of petals that have a substantially uniform thickness, as recited by claim 1.

In addition, the Action asserts that Berger discloses a petal thickness that is capable of being substantially uniform (Figure 4). Figure 4 is a front view of the catamenial device taken along line 4-4 of Figure 1. Applicants respectfully submit that Figure 4, and the remainder of the Berger disclosure fail, to disclose or suggest a plurality of petals that have a substantially uniform thickness, as recited by claim 1. Therefore, Suga and Berger alone or in combination fail to disclose or suggest a plurality of petals that have a substantially uniform thickness, as recited by claim 1.

Accordingly, Applicants respectfully submit that Suga and Berger alone or in combination fail to disclose or suggest all of the claimed features recited in claims 1 and 37

and claims through 10, 13 through 22, 24, 25, 27, 28, 30 through 36 and 38 through 61, 63, 64, and 66 through 71 that depend, respectively, therefrom.

Claim 72 recites a tampon applicator including a tapered barrel and an insertion tip. The tapered barrel has a taper ratio of about 1.2 to about 8. The taper ratio is a ratio of a largest radius of the tapered barrel to a radius of the tapered barrel at a base region of the insertion tip.

Suga and Berger are described above.

Applicants respectfully submit that Suga fails to disclose or suggest all of the claim limitations recited in claim 72. Suga provides that "the full length L may be selected within a range of approximately 70 mm approximately 140 mm". (paragraph 0011, lines 13-14). Suga further provides "an outer diameter D of the outer cylindrical tube 2 may be appropriately dimensioned so far as the outer cylindrical tube 2 can be smoothly inserted into the vaginal canal, the outer diameter D is preferably dimensioned in a range of 8~20 mm." (paragraph 0011, lines 15-19). Length L is the entire length of the barrel as clearly shown in Figure 2. Diameter D is the diameter of the barrel as clearly shown in Figure 2. Thus, Suga provides dimensions of the entire length of the barrel and the diameter of the barrel, which is in contrast to a tapered barrel that has a taper ratio of about 1.2 to about 8 with the taper ratio that is a ratio of a largest radius of the tapered barrel to a radius of the tapered barrel at a base region of the insertion tip, as recited by claim 72. Therefore, Suga does not disclose or suggest a taper ratio, let alone a taper ratio of a ratio of a largest radius of the tapered barrel to a radius of the tapered barrel at a base region of the insertion or a taper ratio of about 1.2 to about 8.

Applicants respectfully submit that Berger fails to disclose or suggest all of the claim limitations recited in claim 72. On page 9, the Action concedes that Suga/Berger do not expressly disclose a barrel taper ratio.

Accordingly, Applicants respectfully submit that Suga and Berger alone or in combination fail to disclose or suggest all of the claimed features recited in claim 72 and claim 73 that depends therefrom.

As such, Applicants respectfully request reconsideration and withdrawal of the §103(a) rejection of claims 1 through 10, 13 through 22, 24, 25, 27, 28, 30 through 61, 63, 64, and 66 through 73.

Claims 11, 23, 26, 29, 62, and 65 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Suga in view of Berger in further view of Werner, U.S. Patent No. 3,765,416 (hereinafter "Werner").

Claims 11, 23, 26, 29 include the features of claim 1 described above.

Claims 62 and 65 include the features of claim 37 described above.

Suga and Berger are summarized above. Werner provides a positive locking arrangement which depends primarily on friction between cooperating portions of the tubes to provide a positive forward lock. The applicator has a pair of telescoping plastic tubes. The outer tube is of right cylinder construction with a substantially uniform internal diameter except for a small portion of the interior adjacent the trailing end. At the trailing end the internal diameter is gradually decreased to provide a rear opening of a predetermined smaller diameter.

As discussed above, Suga and Berger taken alone or in combination, fail to disclose or suggest a taper ratio insertion tip that has a taper ratio greater than 1 to about 8 and is a length of a projection of the insertion tip taper along a longitudinal axis of the barrel to a length of a projection of the insertion tip taper along a radius of the barrel at a base region of the plurality of petals, as recited by claim 1, or a tapered insertion tip that has a taper ratio represented by a ratio of a length of a projection of the insertion tip taper along a longitudinal axis of the barrel to a length of a projection of the insertion tip taper along a radius of the barrel at a base region of one or more petals of greater than 1 to about 8, as

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recited by claim 37. Furthermore, Suga and Berger taken alone or in combination fail to disclose or suggest a plurality of petals that have a substantially uniform thickness, as recited by claim 1.

Werner fails to cure any of the deficiencies of Suga and Berger in that Werner also fails to disclose or suggest a taper ratio insertion tip that has a taper ratio greater than 1 to about 8 and is a length of a projection of the insertion tip taper along a longitudinal axis of the barrel to a length of a projection of the insertion tip taper along a radius of the barrel at a base region of the plurality of petals, as recited by claim 1, or a tapered insertion tip that has a taper ratio represented by a ratio of a length of a projection of the insertion tip taper along a longitudinal axis of the barrel to a length of a projection of the insertion tip taper along a radius of the barrel at a base region of one or more petals of greater than 1 to about 8, as recited by claim 37. Furthermore, Werner fails to disclose or suggest a plurality of petals that have a substantially uniform thickness, as recited by claim 1. Werner provides an inner diameter A of the outer tube throughout a major part of its length is about .579 inch and a rear opening of the outer tube has an inner diameter of about .556 inch. The inner diameter A is of the barrel and the inner diameter B is of an end opposite to a tapered tip as clearly shown in Figures 1 and 2. Therefore, Suga, Berger, and Werner, taken alone or in combination, fail to disclose or suggest the claimed invention recited in claims 1 and 37.

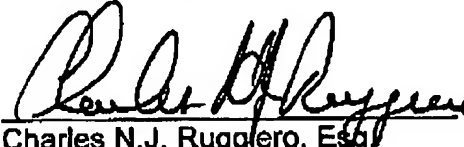
Thus, claims 11, 23, 26, and 29 depending from claim 1 and claims 62 and 65 depending from claim 37 are also patentable over the cited art, taken alone or in combination. As such, Applicants respectfully request reconsideration and withdrawal of the §103(a) rejection of claims 11, 23, 26, 29, 62, and 65.

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In view of the above, reconsideration and withdrawal of the rejections and passage of this application to allowance are respectfully requested.

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